

FUJICHROME 100 iX [RX]

1. FEATURES AND USES

FUJICHROME 100 iX [RX] is a high-image quality, Advance Photo System-dedicated, daylight color reversal film with an ISO rating of 100. This film provides not only the highest sharpness and grain quality available in its speed class, but also clear and faithful colors with balanced and rich gradations. Furthermore, it adopts a base made of polyethylene naphthalate (PEN) for higher durability.

Features	Results
<ul style="list-style-type: none"> • High Resolving Power and Ultrafine Grain 	<ul style="list-style-type: none"> • Provides the highest grain quality and resolving power for films in the ISO 100 speed class.
<ul style="list-style-type: none"> • Pure Color and Faithful Gradation Reproduction 	<ul style="list-style-type: none"> • Reproduces images with faithful hues and highly saturated primary colors, delicate tonality, and realistic gradations.
<ul style="list-style-type: none"> • E-6 and CR-56 Processing 	<ul style="list-style-type: none"> • To be processed at the laboratories designated by Fujifilm.

2. SPEED

Light Source	Speed	Filter
Daylight	ISO 100/21°	None
Tungsten Lamps (3200K)	ISO 32/16°	No. 80A** (LBB-12***)

- * Indicates the effective speed resulting from designated filter use.
- ** Kodak Filter
- *** Fuji Light Balancing Filter

3. EXPOSURES, EMULSION NUMBER AND DX CODE

Exposures 40 exp.
 Emulsion Number 101 and above
 DX code 38-4

4. EXPOSURE GUIDE AND EXPOSURE UNDER VARIOUS LIGHT CONDITIONS

Use a meter for exposure determination. If a meter is not available refer to the following table.

Light Conditions	Seashore or Snow Scenes under Bright Sun	Bright Sunlight	Hazy Sunlight	Cloudy Bright	Cloudy Day or Open Shade
Lens Aperture	f/16	f/11	f/8	f/5.6	f/4

(Exposure Time 1/250th Sec.)

NOTES

- The foregoing settings are for 2 hours after sunrise and 2 hours before sunset.
- Provide lens opening 1/2 stop smaller during the summer and 1/2 stop larger during the winter.
- Excessively bright (or dark) or backlighted subjects may require plus or minus 1 stop lens opening adjustments.

Daylight

Under daylight conditions, color balancing filters are not necessary, but the following exposure conditions may require the indicated filters.

Subject Conditions	Filter	Exposure Correction
Fair weather open shade and shaded landscapes.		
Bright distant scenes, snow landscapes, seaside scenes, aerial scenes and open landscapes.	UV Filter No. 2C* or No. 2B* (Fuji SC-40 or 41)	None
Close-ups of plants and subjects having bright colors.		

Excessively high or low subject color temperatures may require the following filter additions and exposure corrections.

Subject Conditions	Filter	Exposure Correction
<u>High Color Temperature:</u> Cloudy weather landscapes or portraits and clear weather open shade.	No. 81A* (LBA-2)***	+1/3 stop ****
<u>Low Color Temperature:</u> Morning and evening twilight scenes and portraits.	No. 82A* or No. 82C* (LBB-2 or LBB-4)***	+1/3 to +2/3 stop ****

* Kodak Filters

** Fuji Skylight Filter

*** Fuji Light Balancing Filter

**** "+" = Lens opening

Electronic Flash

- Since electronic flash characteristics are similar to daylight, no filters are required. Effective light output and color balance will differ with equipment type, age and other factors, thereby requiring initial exposure tests.
- Adjust lens openings for electronic flash according to following formula.

$$\text{Lens Aperture (f-number)} = \frac{\text{ISO 100 Electronic Flash Guide Number}}{\text{Electronic Flash-to-Subject Distance (meters)}}$$

- Set the film speed at ISO 100. Since the amount of light reflected onto the subject from surrounding surfaces will differ with the conditions, refer to flash unit instructions.

Photo-Reflector Lamps (Daylight Photoflood Lamps)

- Daylight photoflood lamps tend to result in underexposure, so it is sometimes essential to increase exposure light output beyond that indicated by an exposure meter.
- Color balance and light output will differ with lamp configuration, duration of use and applied voltage. It is essential that exposure conditions be determined in relation to the particular lighting equipment employed.

Fluorescent Lamps

- Color balance corrections should be made using the filter combinations suggested below because effective light intensity and color balance varies with lamp make and age.
- For exacting work, test exposures are recommended.

(Exposure Time: 1/4 second)

Fluorescent Lamp Type	White (W)	Daylight (D)	Cool White (CW)	Warm White (W.W)
Color Compensating Filters*	25M+20B	30R+10M	35M	No. 80C +5M (LBB-10 +5M)
Exposure Corrections**	+1 stop	+1 stop	+1 stop	+2 stops

* Kodak CC Filters (or Fuji Color Compensating Filters) recommended.

** Exposure correction values include filter exposure factors. These values are added to unfiltered exposure meter reading. "+" = Lens opening.

NOTES

- Use 1/30th or slower shutter speeds.
- For shutter speeds longer than 32 seconds, exposure adjustments will be necessary to compensate for reciprocity.

Tungsten Lamps

- A Kodak Filter No. 80A (or Fuji Light Balancing Filter LBB-12) is recommended with photoflood lamps. A 1 2/3 stop larger lens opening is also recommended.
- With household tungsten lamps, a Kodak Filter No. 82A (or Fuji Light Balancing Filter LBB-2) will compensate for inherent color temperatures lower than photoflood lamps. A 2 stop larger lens opening is recommended.

Mixed Light Sources

Under mixed light conditions, derive the basic filter configuration for the main light source.

5. EXPOSURE PRECAUTIONS

For artificial light sources such as electronic flash, photoflood lamps, fluorescent lamps, tungsten lamps, mercury lamps and the like, effective light output and color temperatures will vary with the type, the applied voltage and the age of the equipment. Also, light intensity or color temperature differences may be caused by variations in auxiliary lighting equipment such as reflectors and diffusers.

6. FILM HANDLING

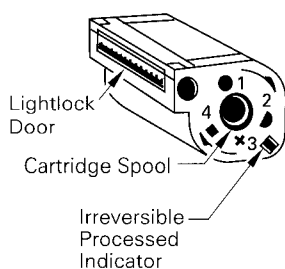
- Expose film before the expiration date indicated on the film package and process immediately after exposure.
- Allow film that has been placed in refrigerated storage to reach room temperature before opening. If you open the film package before it reaches room temperature, moisture will condense on the film and degrade it.

- The following cartridge markings indicate the current status of the film. Make sure to verify the film's status before loading the cartridge.

1	○	Unexposed
2	D	Partially exposed (use of film can be resumed on some cameras)
3	☒	Fully exposed but unprocessed
4	□	Processed

The film leading end (tongue) remains inside the cartridge until the cartridge is loaded into the camera, at which time the leader is automatically extracted. Picture-taking can thus begin after loading of the cartridge. Do not open the lightlock door or change the status indication by rotating the cartridge spool.

Furthermore, do not break out the indicator on the outer perimeter of the status markings if the film has not been processed. Removal of the indicator shows that the film has been processed



- NOTE** This film has a magnetic strip for recording exposure data for later use in obtaining higher print quality or imprinting exposure dates on slide mount frame surfaces.

- After loading film into camera, expose and process it promptly.
- Under certain conditions the X-ray equipment used to inspect carry-on baggage at airport terminals will adversely affect photographic film (cause fogging). The adverse effects of this are increased with the strength of the X-rays, the speed of the film, and the cumulative number of inspection exposures.

Therefore it is recommended that at each inspection the film be removed from the baggage and that airport security personnel be asked to inspect the film manually.

- Film may be adversely affected in hospitals, factories, laboratories and other locations using X-rays and other radiation sources.
- Contains a magnetic strip. Keep away from strong magnetic fields.

7. FILM STORAGE

Unprocessed Film

- Storing exposed or unprocessed film under high temperature and humidity conditions will cause adverse speed, color balance and physical property changes. Store film under the following conditions.

- Short-to-medium term Storage:
Below 15°C (59°F) (Refrigerator)
- Long-term Storage:
Below 0°C (32°F) (Freezer)

- Building supplies, newly manufactured furniture, paints and bonding agents may produce noxious gases. Do not store film, lighttight boxes with film, loaded cameras or film holders under these conditions.
- Before use, allow films to stand at room-temperature; over 3 hours for refrigerated film, and over 6 hours for frozen film. Opening the container while film is cold may cause harmful condensation.

Processed Film

Light, high temperature and humidity cause color changes in processed films. Therefore, place such films in mounts or sleeves and store in dark, dry, cool and well ventilated locations under the following conditions.

- Medium-term Storage:
Below 25°C (77°F) at 30 to 60% RH
- Long-term Storage:
Below 10°C (50°F) at 30 to 50% RH

- NOTE** As with all color dyes, those used in this film will discolor or fade with time.

8. PROCESSING

Process in standard E-6, CR-56 or equivalent chemicals.

9. VIEWING LIGHT SOURCES

Use a standard viewer. Visual responses will differ with light source quality and brightness. Therefore, employ a viewer which meets the ISO/ANSI standards.

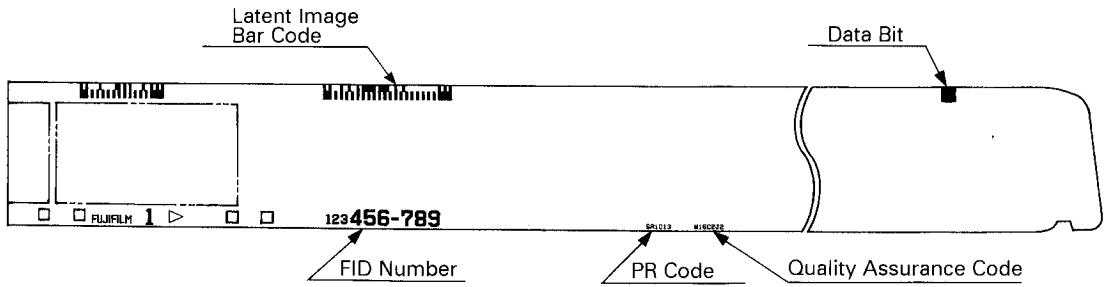
- The ISO standard (ISO/DP3664-2) specifies an illuminated viewer surface with a color temperature derived from a CIE illuminant D50 (D: Daylight) with a reciprocal color temperature of 5000K, an average brightness of 1400 cd/m² ± 300 cd/m², a brightness uniformity of more than 75%, a light diffusion level of more than 90% and an average color rendition assessment value of more than Ra90. Transparency viewers should meet these standards.

10. PRINTS AND DUPLICATES

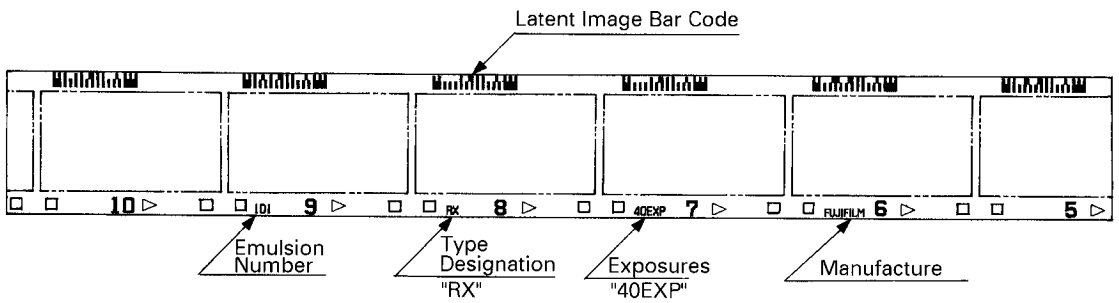
Processed film can be made into prints on FUJICHROME RP Print or FUJICOLOR internegative film IT-N. Duplicates can be made on FUJICHROME DUPLICATING FILM CDU TYPEII.

11. PROCESSED FILM EDGE MARKINGS

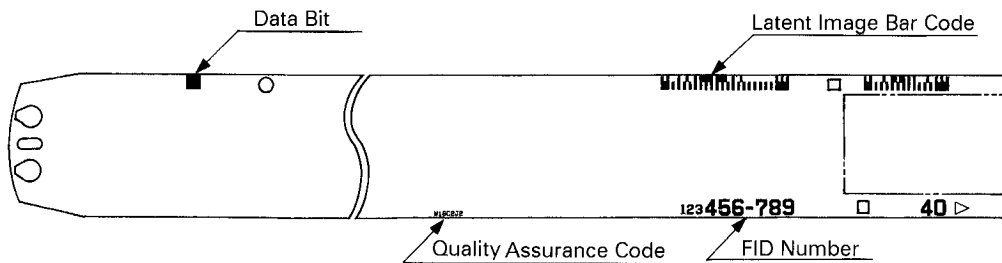
(Leading Area)



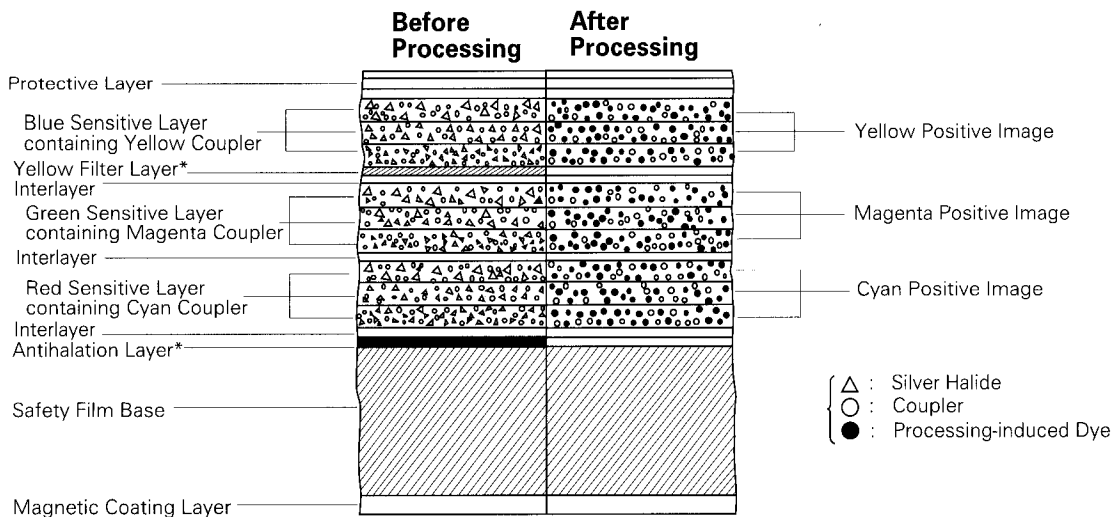
(Middle Area)



(Trailing Area)



12. FILM STRUCTURE



* These layers become colorless and transparent after processing.

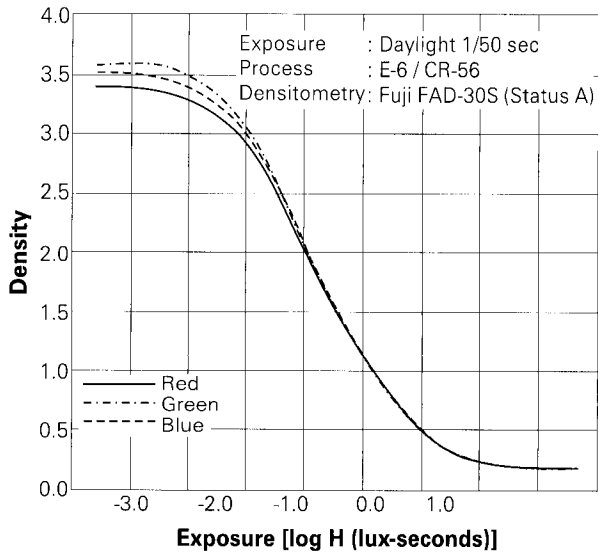
13. DIFFUSE RMS GRANULARITY VALUE 10

Micro-Densitometer Measurement Aperture: 48 μm in diameter.
Sample Density: 1.0 above minimum density.

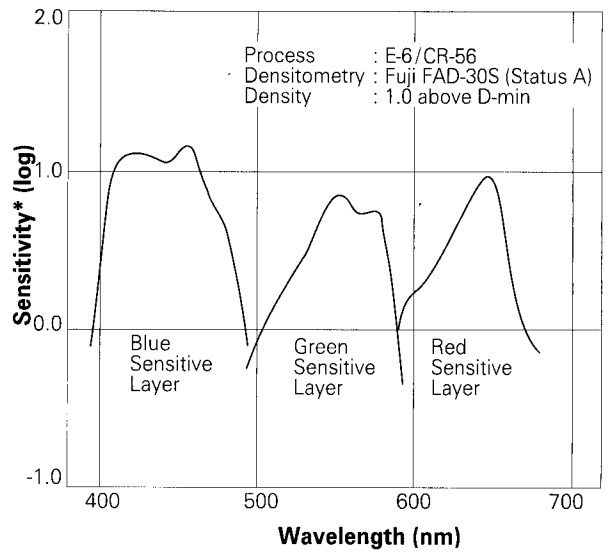
14. RESOLVING POWER

Chart Contrast 1.6 : 1 **60** lines/mm
Chart Contrast 1000 : 1 **140** lines/mm

15. CHARACTERISTIC CURVES

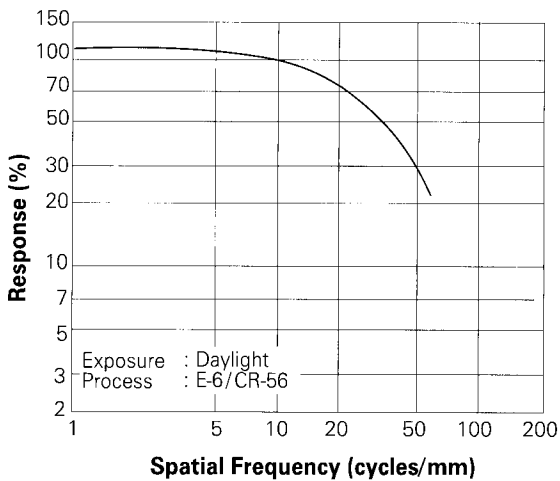


16. SPECTRAL SENSITIVITY CURVES

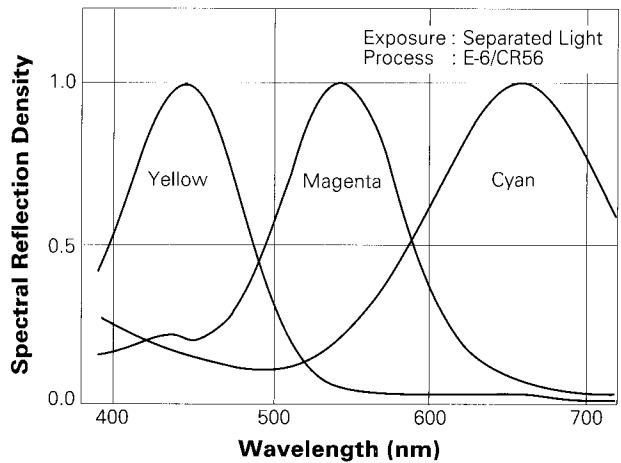


* Sensitivity equals the reciprocal of the exposure (ergs/cm²) required to produce a specified density.

17. MTF CURVE



18. SPECTRAL DYE DENSITY CURVES



NOTICE The data herein published were derived from materials taken from general production runs. However, as Fujifilm is constantly upgrading the quality of its products, changes in specifications may occur without notice.